



BTEC Assignment Brief

Qualification	Pearson BTEC International Level 3 Subsidiary Diploma in Construction and the Built Environment Pearson BTEC International Level 3 Foundation Diploma in Construction and the Built Environment Pearson BTEC International Level 3 Diploma in Construction and the Built Environment Pearson BTEC International Level 3 Extended Diploma in Construction and the Built Environment
Unit number and title	Unit 8: Sustainability in Construction
Learning aim(s) (For NQF only)	A: Understand the impact of construction on the environment. B: Explore the methods of sustainable building design. C: Examine alternative energy sources.
Assignment title	Building for a sustainable future.
Assessor	
Issue date	
Hand in deadline	

Vocational Scenario or Context	You are working as a civil engineering technician for an engineering company. The company has been approached by a client to design a new 5 storey office building in concrete. You have been asked to support some work for the initial phase of the design, by considering the impact of the proposed building on the environment. The building is to be located in the countryside, on the fringe of an old forest, adjacent to a large lake. The building is to be fully glazed in glass and will stand on its own on the skyline. Its construction will require a new two-lane access road and carpark for 100 cars, made from bituminous road surfacing materials. The position of the building footprint will require the removal of approximately 20 trees with girths in excess of 1000 mm. The forest is home to an abundance of wildlife including a rare breed of deer. There is a similar abundance of fish and aquatic life in the lake.
---------------------------------------	--



Task 1	Arrangements have been made for the client to visit your company office to discuss the initial proposals for the new building. You have been asked to contribute to the visit by preparing an introductory presentation for the client explaining: (a) The features of the natural environment which need to be protected to benefit future generations. (b) How construction activities and new development can impact detrimentally on the natural environment. (c) Measures that can be taken to reduce the impact of construction activities and new development on the natural environment. You have been asked particularly to comment upon sustainable material choices, methods to conserve water and approaches to minimise construction waste.
Checklist of evidence required	A presentation that examines the features of the natural environment that need to be protected and which suggests appropriate methods and approaches to minimise the impact of construction activities.
Criteria covered by this task:	
Unit/Criteria reference	To achieve the criteria, you must show that you are able to:
AB.D1	Evaluate the potential impact of construction activities and development on the features of the natural environment.
AB.D2	Review the effectiveness of methods adopted to minimise the impact of construction activities and development on the natural environment for a given scenario.
A.M1	Discuss the potential impact of construction activities and development on the features of the natural environment.
B.M2	Discuss the methods used to minimise the impact of construction activities and development on the natural environment for a given scenario.
A.P2	Explain the impact of construction activities and development on the natural environment.
A.P1	Explain the features of the natural environment that need to be protected.
B.P4	Explain ways of minimising the impact of development on the natural environment.
B.P3	Examine energy, materials and waste-based techniques of sustainable construction.
Task 2	After listening to the presentation, you helped to prepare for Task 1 the client has asked your company to revise the proposal for the new office building. You have been asked to contribute to a report which makes recommendations for increasing the sustainability of the building. You are to provide guidance on the effectiveness of: (a) alternative sources of heating and cooling (b) renewable methods for electricity generation. for the proposed building.
Checklist of evidence required	A report that examines and recommends alternative sources of energy for a proposed development project.



Criteria covered by this task:	
Unit/Criteria reference	To achieve the criteria, you must show that you are able to:
C.D.3	Evaluate the effectiveness of alternative sources of energy for a given scenario.
C.M.3	Analyse the effectiveness of alternative sources of energy for a given scenario.
C.P6	Explain alternative sources of sustainable heating and cooling.
C.P5	Explore renewable methods of electricity generation.



Sources of information to support you with this Assignment	Pearson BTEC National Construction Student Book Authors: Simon Topliss, Mike Hurst, Simon Cummings. Sohrab Donyavi Sustainable Construction Green Building Design and Delivery, 4th Edition, Charles J Kilbert
Other assessment materials attached to this Assignment Brief	